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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,967	07/11/2007	Kazumi Nakayoshi	DC10031PCT (71,051-070)	2691
27305 7590 12/22/2009 HOWARD & HOWARD ATTORNEYS PLLC 450 West Fourth Street Royal Oak, MI 48067			EXAMINER LAM, CATHY FONG FONG	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 12/22/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/598,967	Applicant(s) NAKAYOSHI ET AL.	
	Examiner Cathy Lam	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claim 5 is objected to because of the following informalities: under b) the phrase "the transparent cross-linked silicone body" lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Wolter et al (US 5116472).

Wolter teaches a process of making a substrate for printed circuit boards. The substrate is comprised of a metal layer and an electrical insulating material (col 1 L 6-10). A metallic conductor track is then printed onto the insulating material surface (col 1 L 14-15).

The metal layer which can be an aluminum layer, is coated with a silicon compound A (col 2 L 33-34 & 37-40). The silicon compound A is a commercially available compound which is mainly a crosslinkable organic silane compound (col 3 L 36-65 & col 4 L 1-15). The silicon compound A is resin compound that ranges from colorless to bright yellow. In Example 1, the silicon compound A insulating material is a colorless layer (col 11 L 7-9 and L 31-32). The examiner takes the position that the insulating material is a transparent silicone layer.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-3 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolter et al (US 5116472) in view of Hamakawa et al (US 4612409).

Wolter discloses a silicon compound coated aluminum foil for used as a printed wiring board substrate. A metallic conductor trace track is printed onto the silicon compound. The crosslinked silicone compound is a colorless layer. Wolter however is silent about the thickness of the crosslinkable polysilane compound, its dielectric constant, nor percent transparency of the silicone compound.

In Example 3 of Wolter, the silicone resin layer could have a thickness of about 10 μm (col 13 L 24).

Hamakawa teaches a flexible photovoltaic device comprised of a substrate (1) and an electrode (2) (Fig. 1).

The electrode (2) is formed onto the surface of the substrate (1). The substrate is comprised of a metal layer (1a) and a polymeric layer (1b), the metallic layer (1a) can be an aluminum foil and the polymeric layer (1b) can be a silicone (col 3 L 6-7 & L 19-24). The polymer layer (1b) (or silicone) has a thickness of from 1-20 μm (col 3 L 26-28).

Regarding to the newly added claims 6-9, Wolter's silicone compound layer is a colorless layer which clearly anticipates the scope of the present invention.

In view of the prior art teachings, one skill in the art would choose an insulating silicone material with a desired thickness, properties and in this case the degree of transparency because it is a matter of design scheme.

Response to Arguments

6. Applicant's arguments filed on August 17, 2009 have been fully considered but they are not persuasive. The examiner takes the position that the prior art of record continue to meet the present invention both anticipatory and obvious.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 1794

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cathy Lam whose telephone number is (571) 272-1538. The examiner can normally be reached on 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cathy Lam/
Primary Examiner, Art Unit 1794